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# SANITATION OF SCHOOLS

## Suggestions for Teachers

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The material in this publication is intended chiefly for the use of teachers, especially where they are directly responsible for the sanitary conditions of the school or where janitorial assistance is inadequate or occasional. Some of the suggestions may, in a given case, require the cooperation or assistance of the school board, and the responsibility for conditions in the school plant may need to be shifted to their shoulders.

### Heating and Ventilating

Of the material conditions of the school which affect children wholesale, probably heating and ventilation have most to do with their health. While the school should be so well heated that there are no complaints of cold from a child with the usual amount of clothing, and not seated near a door or window, the temperature should not be allowed to reach such a pitch that children show the effects in flushed faces, drowsiness, dullness, or other signs of overheating. An accurate thermometer is of help, if so located that it gives a fair average reading for the room. It should be placed at about the height of the desks and should not be close to the source of heat or near a door or window. A good plan is to attach it to a strip of wood or of metal projecting above the teacher's desk where it can easily be read. A temperature of from 66° to 70° is considered most suitable. In stove-heated rooms, however, variations of as much as 46° have occurred on cold days in the thermometer readings on the tops of occupied desks and there are wide differences in temperature between the floor and the top of the desks.

In a room heated by a soft coal stove or furnace the temperature varies so much from time to time that the thermometer serves only as a general guide to what is a comfortable atmosphere. Changes of

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temperature are considered a good thing, provided, however, that the limits of comfort are not overstepped.

If windows are opened wide for physical activities or at recess, they should be readjusted in time to prevent lowering the temperature too much.

Cold floors are especial sources of discomfort and chill for both teacher and pupils, and where the floors are freely exposed to all changes of weather the use of a few sacks of cement in making tight the foundation or the application of a second floor, will save their cost in fuel and in doctor bills.

While the temperature of the room is important, the need for change of air can not be neglected and there seems to be special virtue in "fresh" air introduced directly through windows or ventilators. Continuous drafts, however, are now, as they always have been, dangerous, for they extract heat too rapidly, especially from inactive bodies. Glass or wooden deflectors properly placed at the bottom of the windows will usually obviate direct drafts.

The jacketed stove is by no means all it is supposed to be in the way of a distributor of heat; wherever it is placed in the room and even though it be jacketed, the children who are too warm or too cold should be given the privilege of changing to a more suitable climate, as should also those who complain of drafts. Children are not likely to speak of discomfort without due cause.

## Clothing and Wraps

The clothing of pupils and teacher has a distinct bearing on the heating and ventilation of the school. A teacher who is lightly clad is likely to keep the temperature of the room too high for children, even with the same amount of clothing, while overclothed children are not comfortable at desirable temperatures.

The teacher should see that outside wraps and rubbers are removed by the pupils on entrance to school, and that wet clothing or wet shoes are dried as soon as possible. The loss of body heat is greatly increased by the evaporation of moisture, and this goes on most rapidly at high temperature and with forced-draft ventilation. Pupils who come some distance should keep a pair of clean stockings in their desks for use in emergency, the wet ones being carried home for laundering.

Wire racks over electric lamps provide a means of drying outer garments; such arrangements can be made in cloakrooms or ventilated clothes closets where these are a part of the schoolroom and where electricity is provided.

## Lighting

Pupils should not face the light while they work. It is desirable that the light should come from the left of the pupils or from both sides. Light from the rear of the room is of little benefit to the pupils and is a source of irritation and strain to the teacher. Windows in this part of the room should be shaded. Direct sunlight should be softened by light-colored translucent shades which preferably can be lowered from the top as well as raised from the bottom.

Light-colored, clean walls and ceilings add greatly to the amount of light as well as to the cheerfulness of the room. Light cream, light pink, and light yellow are the most highly reflecting colors. Clean windows add to the total light. Where there are near-by high buildings, as is too often the case in cities, a coat of white paint applied to the opposing wall will add to the illumination.

Artificial lights should be shaded with ground glass or other means of preventing glare.

## Cleaning

The provision of mats and foot scrapers at the entrance helps in keeping floors clean. Children should be urged to wear rubbers which should be removed on entrance and left in the cloakrooms. A cement or a quickly draining walk, from the street to the school and from the school to outside toilets, helps further in reducing dirt and dust, while a well-drained, well-surfaced playground adds further to the cleanliness of the school and also to the usefulness of the ground.

Untreated floors should be scrubbed with hot water and soap at the beginning of the term or oftener. The frequency with which they are mopped will depend on the nature of the floor and on such conditions as have already been mentioned. Floors properly oiled at the beginning of each term (too much oil should not be used) are more easily cleaned. Waxed floors are still more impervious to dirt. Desks and seats should be thoroughly washed before the opening of school and afterwards should be kept clean by the pupils.

Sweeping and dusting should not be done when pupils are present. Wet paper (bits of old newspaper soaked in water and the surplus squeezed out), moist sawdust, or special sweeping compounds should be used with a floor brush. Dusting should be done with a moist cloth or a cloth treated with a few drops of kerosene or furniture polish.

Blackboards should be washed with water as needed to keep them really black. Erasers should be cleaned out of doors by beating them together. Chalk trays should be cleaned frequently.

Windows should be washed at least once a term and oftener if needed. Warm water with a little kerosene (a teaspoonful to the pail of water) is recommended for this purpose.

The seat and desk of a pupil who develops a communicable disease while attending school should be washed with soap and water and an antiseptic.

## Washing Facilities

It is not consistent to teach personal cleanliness unless facilities are provided in school for keeping clean, if it be only a washbasin, a pitcher of water, and a waste pail. Liquid soap should be supplied either in the usual commercial container or in a common oil can manipulated by the teacher or fellow pupil. Water can be delivered on the hands of the pupil from a pitcher or from a tank by means of a faucet turned by another pupil. Where paper towels are not furnished, each pupil may bring a towel from home each week. Pupils can prepare for lunch within a comparatively short time and with only an oil can of soap, a pitcher of water, paper, or other towels, and toothpicks for finger nails. Where more elaborate washing facilities are provided these should be kept clean.

## Toilets

The toilets, which should conform in both construction and location to the requirements of the local or State department of health, should not attract flies and, above everything else, should not be a menace to the water supply. They will be treated with respect in proportion as they are respectable. Besides being constructed in sanitary fashion, as regards disposal of excreta, toilets should be well-lighted and coated annually inside and out with a light-colored paint. The maintenance of sanitary toilets by the pupils themselves becomes a project in public health.

Where a janitor is employed toilets should be thoroughly cleansed daily with soap, water, and disinfectants. If this is not possible, some one should be employed to clean them at least weekly.

## Water Supply

The water supply should be safe beyond questioning. If there is any doubt this should be determined, before the water is used, by the local or State health authorities, who will be glad to make the investigation.

If there is a drinking fountain, it should be so constructed that the lips of the drinker will not come in contact with the source of flow or with water touched by the mouth of the preceding person. Many fountains are insanitary.

Where a tank is used it should be covered and the water drawn through a faucet. The child should have an individual tumbler, which may be kept in his desk. If it seems more desirable, the tumblers can be labeled with a strip of surgeon's plaster, with the owner's name written on it, and they may be placed *right side up* on a shelf near the container for water.

## Lunch Outfit

Where and when flies abound, lunches brought from home and lunch materials in the school should be kept in cupboards or other fly-tight containers. Tables and other furniture or utensils used in connection with the lunch should be thoroughly cleaned after use (pupils should serve as housekeepers), and all remains of food, paper napkins, etc., should be placed in a garbage can and promptly disposed of by burying or burning. When it is recalled that flies often travel from the toilet to the schoolroom, with the possibility of typhoid infection if they alight on food, the teacher should be stimulated to look after the cleanliness of both school and toilets and to the use of fly screens if necessary.

## Playground

The playground should be as useful as possible and for as many days as possible. Stones or stumps may need to be removed and grading or drainage performed. Unless there is a strong covering of grass, the ground may need to be surfaced in order to render it clean and quickly drying. A mixture of sand and loam, or sand and gravel with about 20 per cent of the former, is considered a good material for surfacing. Playgrounds should be kept clean by the pupils, who can often do much toward their improvement.

If apparatus is provided, it should be placed where it will not cause accidents or interfere with games. It should be so constructed that it will be safe, and should be thoroughly examined at the opening of the school year as to its condition. Where children of different ages play together, a place should be arranged where young children may be out of danger from the activities of older pupils. The teacher should supervise the recess periods sufficiently to see that all children have full opportunity for play without interference.

## Fire Protection

If for no other reason than to save possible loss of property, it is no more than fair that the teacher ask to have an annual inspection of the building by an insurance agent. The vicinity of stoves and furnace rooms should be kept free from inflammable materials and wood-

work in the immediate neighborhood of heated pipes or cooking apparatus should be amply protected by asbestos or by sheet metal. Doors of the schoolroom and schoolhouse should open outward without difficulty, and any special means of exit in case of emergency should always be in working order. While there is little excuse for the too frequent fires in schoolhouses, each room should be equipped with one or more reliable fire extinguishers which the teacher and older pupils should know how to use.

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